

**LEPIDIOTA BRITTONI, A NEW SPECIES FROM COASTAL  
NEW SOUTH WALES (COLEOPTERA: SCARABAEIDAE:  
MELOLONTHINAE)**

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**Abstract**

*Lepidiota brittoni* sp. n. is described from specimens of both sexes taken 10 km northeast of Wingham in central coastal New South Wales.

**Introduction**

*Lepidiota* Kirby is a large genus of white grubs which occurs from India and China, south through the Philippines, Indonesia and New Guinea to the northern half of Australia. The Australian species were last revised by Britton (1978), with another four species being described since (Britton 1985; Allsopp 1989, 1990); 58 Australian species are known.

This paper describes a further species from central coastal New South Wales. Its occurrence there extends the known distribution of the genus further to the south in eastern Australia; *L. ciliata* Britton, *L. negatoria* Blackburn, *L. picticollis* Lea and *L. squamulata* Waterhouse are all known south to about 30°S (Britton 1978).

*Lepidiota brittoni* sp. n.

(Figs 1, 2)

*Types* - NEW SOUTH WALES: *holotype* ♂, W Boundary Road, Yarrat S[tate] F[orest] [31°48'S, 152°25'E], 7.i.1994, S. Watkins and J. Stockard (in Australian National Insect Collection (ANIC), registered number 121); *paratypes*: 2♂♂, 13♀♀, same data as holotype; 2♀♀, same data except 11.i.1994; 3♂♂, 6♀♀, same data except 23.i.1994; 3♀♀, same data except 14.ii.1994; 1♂, same data except 17.ii.1994; 1♂, same data except 27.ii.1994; 1♀, same data except 5.iii.1994; 2♀♀, same locality, 30.i.1994, S. Watkins (ANIC, Australian Museum, Allsopp collection, Watkins collection, Queensland Department of Primary Industries [Mareeba]).

*Description*

**MALE:** Length 24-28 mm. Body and legs reddish brown to almost black on head, antennae and palpi brown. Labrum deeply bilobed, almost to base, anterior surface setose. Clypeus with anterior face glabrous and impunctate on median third, setose laterally; upper surface with anterior edge concave in the middle and broadly rounded on each side, maximum width 4.4 times mid length, surface punctate, near anterior margin each puncture with an elliptical white scale, scales towards posterior more circular. Frons slightly convex, coarsely punctured, each puncture enclosing an almost circular white scale, scales larger and more elongate along ocular margins; angle between lateral

edge of clypeus and ocular canthus obviously obtuse. Terminal segment of maxillary palp fusiform, elongate, 3.5-3.8 times as long as maximum width, with an elongate-elliptical, flat, minutely strigose area on upper-outer side. Antenna 10-segmented with a 3-segmented club; club 1.3-1.35 mm long, slightly longer than segments 3-7 combined. Pronotum with a narrow raised anterior margin continuous from side to side; raised posterior margin on middle half of each side, less defined laterally, very slightly interrupted in middle; disc uniformly punctured, punctures enclosing circular white scales, punctures slightly more dense along lateral margins and in posterolateral angles with scales more elongate, surface between punctures smooth and shining; maximum width 1.6-1.7 times mid length. Scutellum sparsely punctured, with white scales like disc of pronotum. Elytra punctate, the punctures each bearing a slightly ovoid scale; intervals 1, 3 and 5 slightly convex and with fewer punctures than broader intervals 2, 4 and 6. Propygidium densely setose on anterior two-thirds, posterior third with elongate white scales. Pygidium more densely punctate than elytra, about 50-60 mm<sup>2</sup>, each puncture bearing an ovoid white scale, fine long setae on margin at apex. Pronotal hypomera shining and without scales or punctures in a broad band between outer edge of coxal cavity and lateral edge of pronotum. Mesepisternum clothed with long thin setae. Mesepimeron clothed with elongate white scales, some long thin setae on outer edge and in posterolateral angles. Metepisternum with long fine setae on extreme anterior, middle and posterior clothed with elongate white scales. Metasternum clothed with dense long fine setae, without scales. Metepimeron with patch of elongate white scales and longer fine setae on outer margin, remainder clothed with long fine setae. Mid and hind coxae with elongate white scales and long setae on outer edges. Ventrites 3 and 4 with elliptical scales 3-4 times as long as wide, more crowded towards sides, central scales more ovoid; ventrites 5-8 with ovoid scales, less dense in centre than on sides, ventrites 7-8 with few scattered long setae in addition. Aedeagus with asymmetrical parameres (Figs 1-2).

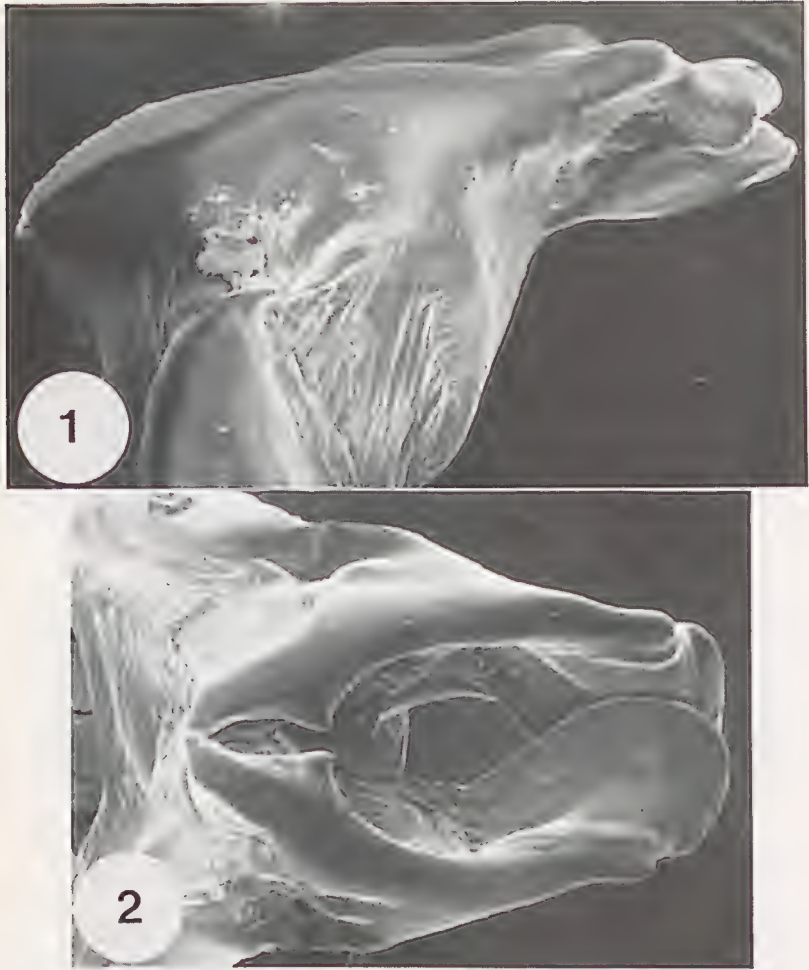
FEMALE: Length 23-27 mm. Antennal club 1.1 mm long. Pygidium with scales less dense, about 40-50 mm<sup>2</sup>. Posterior margin of ventrite 8 slightly indented. Otherwise like male.

### *Etymology*

The species is named for Ev Britton whose studies of the Australian Melolonthini provide the foundation for this paper.

### **Comments**

*Lepidiota brittoni* is the southernmost member of a group of species including *L. yorkensis* Britton (Cape York Peninsula), *L. caudata* Blackburn (in or near northeastern Queensland rainforest), *L. gibbifrons* Britton (in northeastern and central Queensland open forest), and *L. noxia* Britton (southeastern Queensland) (Britton 1978, 1985; Allsopp 1989, 1990;



**Figs 1-2.** *Lepidiota brittoni* aedeagus: (1) lateral view; (2) apical view.

Chandler 1989). *L. caudata* and *L. noxia* are pests of sugarcane (Allsopp *et al.* 1993), while larvae of *L. gibbifrons* are known to damage pineapples in central Queensland (R. M. Bull, pers. comm.). The type locality of *L. brittoni* is a fire break separating open forest from grazing land. The cleared areas contain immigrant *Allocasuarina* with mixed heath forbes. *Syncarpia*, *Eucalyptus* and *Xanthorrhoea johnsonii* dominate the forested area.

Species of the group are very similar and are best distinguished by the form of the aedeagus (compare Figs 1, 2 with Figs 1-6 in Britton (1985)); the aedeagus of *L. brittoni* is less depressed at the apex of the left side (lower side in Fig. 1), has more pronounced ridges on the upper surface (Fig. 2), has the

apex of the right side more flattened and broader and with a larger indentation on the lateral margin (Fig. 1), and has sharper inner points (Fig. 2) than in *L. noxia* (Britton 1985, Figs 3, 4). In addition, *L. brittoni* differs from *L. noxia* by having denser scales on the pygidium (35 mm<sup>-2</sup> in *noxia*).

*Lepidiota brittoni* can be incorporated into Britton's (1978) key with the following modifications which also incorporate the changes suggested by Allsopp (1989):

11. Angle between the lateral edge of the clypeus and the ocular canthus square ..... 12  
 Angle between the lateral edge of the clypeus and the ocular canthus obviously obtuse ..... 11a
- 11a. Surface of the frons strongly convex, with a marked anterior declivity (Britton 1978, Fig. 280C); aedeagus as in Britton (1985, Figs 1, 2); female with a sharply defined declivity at the apex of the terminal ventrite ..... *gibbifrons* Britton  
 Surface of the frons less strongly convex, without a marked declivity; female with the apex of the terminal ventrite with at the most a slight indentation ..... 11b
- 11b. Scales of the pygidium denser, in males 50-60 mm<sup>-2</sup>, in females 40-50 mm<sup>-2</sup>; aedeagus as in Figs 1, 2; female with a slight indentation of the apex of the terminal ventrite ..... *brittoni* Allsopp and Watkins  
 Scales of the pygidium less dense, 35 mm<sup>-2</sup>; aedeagus as in Britton (1985, Figs 3, 4); female without any indentation at the apex of the terminal ventrite ..... *noxia* Britton

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